

An Optical/Photonic approach in the Biomedical science

Project Description: Over the past few decades, single-molecule experimental methods have been widely used because they can visually and quantitatively examine the dynamics of biological interactions at the single-molecule level, which is not possible with other modes such as cryo-electron microscopy. Moreover, as an Optical/Photonic approach in the biomedical science, the single molecule TIRF (Total Internal Reflection Fluorescence) microscope system has been a flagship method and enabled to provides a great amount of the experimental data incomparable to the other single molecule methods by detecting single molecule FRET (Fluorescent Resonance Energy Transfer) or tracking single molecule Fluorophore. However, for some biological processes, it has been still limited to directly connect the *in-vivo* biological phenomena. Therefore, here we propose an improved platform of the single molecule TIRF system, which can more closely study on the *in-vivo* biological processes, which thereby provide the better medical insight on it. Since this project encompasses the creation of a new method, which incorporates and merges the previous processes and develop a new platform to fit our requirement, all the members are required to be challengeable and innovative.

Job Description: We are seeking a highly motivated and active research fellow specializing in any field of Engineering or Science, or related field with a focus on the bio, or biomedical science or engineering. The ideal candidate will be one who is very willing to learn the new technologies, or areas in science and furthermore consider this is his, or her own project (Ownership). The research fellow will play a key role in executing this project by managing, designing, implementing, performing the experiment and analyzing the data. Collaborating closely with a diverse team of researchers and engineers, you will actively contribute to the development and submission of research papers in decent reputable journals. Throughout the experience as a Focused Research Extended Experience (FREE) research fellow, you will be able to cultivate the relevant research and practical skills in a focused and extensive manner such that enhancing your chances for advancing graduate studies or getting a long term well-paid industrial job.

This position commences in or after early 2024, with individuals anticipated to initiate their responsibilities no later than Spring 2024. The term of employment spans two years, and the contract is structured for annual renewal.

Qualifications:

- Master's or Bachelor's degree in any field of Engineering or Science, or related field with a focus on the bio, or biomedical science or engineering, biophysics.
- Plus on the experience with the Optics.
- Plus on the experience with the experimental test, and design.
- Plus on the experience of the biological or biomedical technologies

For questions regarding this position, please contact Dr. Jeunghill Hanne, at jeunghill.hanne@scupi.cn